Amendments to the Specification:

Please make the following amendments (underlining for added matter and ~~strikethroughs~~ or [[brackets]] for deleted matter) to the specification:

In the "Detailed Description of the Drawing" on page 7, please enter the following replacement paragraph:

Exemplification:

A study was conducted to show that the photopolymerization step is a source of enzyme alteration for an unprotected enzyme and to compare that result with a photopolymerization step conducted with a protected enzyme. In this study, two sensitive molecules, horseradish peroxidase (HRP) and α-glucosidase (α-GLS), were tested in an unprotected and protected form. The protective formulation was developed based on the use of nonaccessible substances, since the polymerizing environment would not affect nonaccessible substances. Enzymes used in the study were protected by wet granulation, although different techniques may be used and the present invention is not so limited. *See* Benita S, editor, "Microencapsulation," Methods and industrial application, New York: Marcel Dekker, Inc. (1996); ~~Remingtong JP, "Remingtong's~~ Remington JP, "Remington's Pharmaceutical Sciences," 18^{th} ed., Easton: Mack Publishing Company (1990); all herein incorporated by reference. After entrapment in a photo-cured matrix, enzymes were recovered by passive diffusion and characterized by activity retention and MALDI-TOF analysis. *See* Pandey A, Mann M, "Proteomics to study genes and genomics," *Nature*, 405(6788), 837-846 (2000); Gygi SP, Aebersold R, "Mass spectrometry and proteomics," *Curr Opin Chem Bio* 4, 489-494 (2000); all herein incorporated by reference.

In the "Detailed Description of the Drawing" on the bottom of page 18 (at line 25) and top of page 19 (to line 17), please enter the following replacement paragraph:

The protected form was achieved by wet granulation with a 5% gelatin-B aqueous solution. The fundamental principle of wet granulation is to add a binder (e.g., gelatin aqueous solution) that will initially form liquid bridges between the particles (lactose and enzyme). *See*

~~Remingtong~~ Remington JP, supra. These bridges allow the evolution of small aggregates and particles to larger entities. Further agglomeration of these entities results in the formation of a wet mass that can be granulated by sieving. Finally, gelation of gelatin confers strength to granules by holding together the components, which will then be dispersed within the gelatin gel. Therefore, granulation could be considered a macroencapsulation process. The rationale behind diluting the enzyme with a 100-fold excess of β-lactose was to decrease the probability of the enzyme residing on the outermost layers of granules and thus being available for interaction with the polymerizing species. Furthermore, the dilution step simulates a conventional pharmaceutical practice wherein a potent drug is diluted to avoid weighing errors. *See* ~~Remingtong~~ Remington JP, supra; USP 24, supra. The choice of gelatin as a binder was based on the following considerations: it has a thermo-reversible gelation point around 37°C. This characteristic, in combination with the high solubility of β-lactose, allows granules to dissolve very rapidly when they come in contact with water or aqueous solutions maintained at 37°C thereby affording intermediate availability of the entrapped molecules. *See* Kibbe AH, editor, "Handbook of pharmaceutical excipients," 3rd ed. Washington, DC: American Pharmaceutical Association, Pharmaceutical Press (2000); herein incorporated by reference. Nevertheless, because the amount of gelatin used for granulation was quite small (few drops of 5% gelatin-B aqueous solution per 1 g of unprotected powder), it was observed that granules dissolved in around 15 minutes even at 4°C.

In the "Abstract of the Disclosure" on page 33, please enter the following replacement paragraph:

Abstract of the Disclosure

~~In one embodiment, the present invention is a substrate system of photo-polymerizable monomers and bioactive molecules admixed with the monomers and shielded from the monomers by an insoluble material that undergoes a solid-gel transition at body temperature. Upon polymerization, the monomers produce a cross-linked structure and the shielded bioactive molecules are protected from attack in the polymerized environment.~~ The present invention relates to drug delivery or substrate systems which include photo-polymerizable monomers, and

drug molecules admixed with the monomers, wherein upon polymerization, the monomers produce a cross-linked structure that undergoes a solid-gel transition at the body temperature of the living organism to which the substrate system is administered, and a material insoluble by the monomers and that protects the drug molecules during the polymerization process. ~~In different aspects, the~~ The drug delivery or substrate system [[is]] may be used for drug delivery and tissue engineering and protection of enzymes, proteins and growth factors. ~~In another embodiment, the present invention is a drug delivery system of photo-polymerizable monomers, drug molecules associated with the monomers and shielded from the monomers by an insoluble material that undergoes a solid-gel transition at body temperature, and a photopolymerizing means for polymerizing the monomers to produce a cross-linked structure including the drug molecules.~~

Amendments to the Drawing:

Please enter the amendments to the drawing, attached as "Replacement Sheet."